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EXAMINER
KHAN, ASHER R

ART UNIT	PAPER NUMBER
2621	

NOTIFICATION DATE	DELIVERY MODE
03/03/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _06 November 2008_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-20_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1;5-10;14-18_ is/are rejected.

7)☒ Claim(s) _2-4,11-13,19 and 20_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

DETAILED ACTION

Allowable Subject Matter

Claims 2-4, 11-13, and 19-20 are objected to as being dependent upon a

rejected base claim, but would be allowable if rewritten in independent form including all

of the limitations of the base claim and any intervening claims

Election/Restrictions

Restriction is withdrawn.

Response to Arguments

Applicant's arguments filed 7/18/2008 have been fully considered but they are

not persuasive.

In re page 14 line 10 -18, Applicants argue that the current rejection is deficient

because the rejection does not identify which items in Fig. Ib correspond to Applicant's

claimed output control unit, transmission control unit, demux, VBV buffer and decoder.

In response the examiner respectfully disagrees. As to an output control unit, the

trick play operation of the reference (Hallberg, Col. 39 -63) anticipates the claim

limitations because trick play is output of predetermined play back mode.

As to a transmission control unit, the capacity of the elementary buffer 54 limits

the bit rate of the transport stream (Hallberg, Col. 6, line 58-59) and time required to

transmit the new trick play GOP to the elementary buffer 54 is determined (Hallberg,

Col. 7, lines 16-17) anticipates the claim limitations because of controlling of bit rate of

transport stream and transmission time point (time required to transmit the new trick

play GOP to elementary buffer) is based on predetermined playback mode (trick play)

and VBV buffer (elementary buffer).

As to a demux, Fig. 1b shows a demultiplexer 52. As to VBV buffer Fig. 1b

shows an elementary buffer 54. As to decoder Fig. 1b shows video decoder 56.

In re page 22 lines 1-10, Applicants argue that Hallberg does not disclose or

suggest a b) adjusting DTS (decoding timestamp) of a picture to be decoded according

to the direction. Applicants further argue that Hallberg does not disclose or suggest

adjusting DTS (decoding timestamp) of a picture to be decoded according to the ...

multiple-times speed of the trick play mode.

In response the examiner respectfully disagrees. Hallberg discloses adjusting

DTS (decoding timestamp) of a picture to be decoded according to the direction (Fig. 4,

and mentions trick play and decoding which respect to direction i.e. forward or reverse,

Col. 10 line 42-55 and adjusting of DTS (decoding time stamp) for trick play, Col 11. line

45-47). Applicants further argue that Hallberg does not disclose or suggest adjusting

DTS (decoding timestamp) (Col 11. line 45-47) of a picture to be decoded according to

the ... multiple-times speed of the trick play mode (trick play at multiple speeds is

mentioned in Col 7 line 39-57).

In re page 22, lines 1-10, Applicants argues Hallberg argue that decrementing an

STC count according to a direction of a trick play mode.

In response the examiner respectfully disagrees. Hallberg discloses

decrementing an STC count (decrement display frame count, 92, Fig. 4) according to a

direction (reverse and forward trick play modes Col. 7, lines 10-20) of a trick play mode

(Fig. 1b) (Fig. 4)(Fig. 6)(Col. 7, lines 39-67;Col. 8 lines 1-27)

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   **Claims 1, 5-8 and 14-16 are rejected under 35 U.S.C. 103(a) as being**

anticipated by U.S. Patent 6,658,199 B1 to Hallberg in view of U.S. Patent

7,031,259 to Guttman et al. "Guttman"

As to claim 1, Hallberg discloses a system recording and playing back a transport

stream transmitted by a digital broadcast, a digital video record/playback apparatus

comprising: an output control unit outputting a predetermined playback mode (Col. 3,

lines 39-63);

a transmission control unit controlling a transmission bit rate and transmission time point

of the transport stream based on the predetermined playback mode and VBV (video

buffering verifier) buffer (Fig. 1b)(Col. 6, lines 43-68; Col. 7, lines 1-26);

a demux performing an STC (system time clock) count initialization and STC count

control on a PCR (program clock reference) packet of the transport stream inputted via

the transmission control unit, the demux extracting ES (elementary stream) data for a

program data packet of the transport stream (Fig. 1b)(Col. 4, lines 53-68; Col. 5, lines 1-

28);

a VBV buffer temporarily storing the extracted ES data, the VBV buffer playing a role in

buffering between the transmission bit rate and a decoding frame rate(Fig. 1b)(Col. 6,

lines 30-43; Col. 10, 57-67; Col. 11, lines 1-21); and

a decoder adjusting DTS (decoding timestamp) according to the predetermined

playback mode of the output control unit, the decoder controlling a decoding time point

by comparing the adjusted DTS to an STC count value and decoding the ES data

outputted from the VBV buffer (Fig 1b) (Fig. 4)(Fig. 6) (Col. 10, lines 42-67)(Col. 11, 1-

60).

Hallberg does not expressly disclose the VBV buffer outputting a buffer status to

the transmission control unit.

Guttman discloses the VBV buffer (Buffer 70_1) outputting a buffer status (status

signal) to the transmission control unit (control unit 76) (Col 10, line 36-53).

At the time of invention, it would have been obvious to a person of ordinary skill

in the art to combine Hallberg with the teachings of Guttman. Motivation to combine

would have been to provide status information of the decoding buffer so that data is not

lost by overflowing of the buffer.

As to claim 5, Hallberg further discloses wherein the transmission control unit

outputs a PCR value of a next picture following a picture to be played back as a PCR

value to be transmitted for the STC count initialization in case of an N-times speed

reverse trick play mode (Fig. 4)(Fig. 6)(Col. 10, lines 42-67)(Col. 11, 1-60)(Col. 7, lines

39-67;Col. 8, lines 1-3).

As to claim 6, Hallberg further discloses wherein if a playback mode and a first picture to be played back are determined, the demux initializes an STC count value becoming a reference of the decoding time point with a PCR value of the determined picture and an STC count is then synchronized with an STC (system count clock) according to a playback direction to be sequentially decremented (Fig. 4)(Fig. 6)(Col. 5, lines 1-29)(Col. 7, lines 39-67;Col. 8, lines 1-3).

As to claims 7 and 16, Hallberg further discloses wherein the decoder determines the decoding time point by comparing the sequentially decremented STC count value to a readjusted DTS value (Fig. 4)(Fig. 6)(Col. 5, lines 1-29)(Col. 11, lines 22-60))(Col. 7, lines 39-67;Col. 8, lines 1-3)(Col. 7, lines 39-67;Col. 8, lines 1-3).

As to claim 8, Hallberg discloses digital video record/playback apparatus comprising: a record control unit only selecting transport packets corresponding to a program to be stored in a transport stream, the record control unit extracting picture information and PCR (program clock reference) of the program to be Used in playback (Fig. 1b)(Col 5, lines 1-30);

a storage medium storing the transport packets of the program selected in the record control unit, the picture information, and the PCR of the selected program;

an output control unit outputting a predetermined playback mode (Fig. 1b)(Col 5, lines 1-30);

a transmission control unit controlling a transmission bit rate and transmission time point of the transport stream based on the predetermined playback mode and VBV (video buffering verifier) buffer (Fig. 1b)(Col. 6, lines 43-68; Col. 7, lines 1-26);

a demux performing an STC (system time clock) count initialization and STC count

control on a PCR (program clock reference) packet of the transport stream inputted via

the transmission control unit, the demux extracting ES (elementary stream) data for a

program data packet of the transport stream (Fig. 1b)(Col. 4, lines 53-68; Col. 4, lines

53 - 68; Col. 5, lines 1-29);

a VBV buffer temporarily storing the extracted ES data, the VBV buffer playing a role in

buffering between the transmission bit rate and a decoding frame rate (Fig. 1b)(Col. 6,

lines 30-43; Col. 10, 57-67; Col. 11, lines 1-21);and

a decoder adjusting DTS (decoding timestamp) according to the predetermined

playback mode of the output control unit, the decoder controlling a decoding time point

by comparing the adjusted DTS to an STC count value and decoding the ES data

outputted from the VBV buffer (Fig 1b)(Fig. 4)(Fig. 6)(Col. 10, lines 42-67)(Col. 11, 1-

60).

Hallberg does not expressly disclose the VBV buffer outputting a buffer status to

the transmission control unit.

Guttman discloses the VBV buffer (Buffer 70_1) outputting a buffer status (status

signal) to the transmission control unit (control unit 76) (Col 10, line 36-53).

At the time of invention, it would have been obvious to a person of ordinary skill

in the art to combine Hallberg with the teachings of Guttman. Motivation to combine

would have been to provide status information of the decoding buffer so that data is not

lost by overflowing of the buffer.

As to claim 14, Hallberg further discloses wherein the transmission control unit outputs a PCR value of a next picture following a picture to be played back as a PCR value to be transmitted for the STC count initialization in case of an N-times speed reverse trick play mode (Fig. 4)(Fig. 6)(Col. 10, lines 42-67)(Col. 11, 1-60))(Col. 7, lines 39-67;Col. 8, lines 1-3).

As to claim 15, Hallberg further discloses wherein if a playback mode and a first picture to be played back are determined, the demux initializes an STC count value becoming a reference of the decoding time point with a PCR value of the determined picture and an STC count is then synchronized with an STC (system count clock) according to a playback direction to be sequentially decremented(Fig. 4)(Fig. 6)(Col. 5, lines 1-29)(Col. 7, lines 39-67;Col. 8, lines 1-3).

As to claim 17, A playback method in a digital video record/playback apparatus, comprising:

a step (a) of storing transport packets of a selected program, picture information, and PCR (program clock reference) of the selected program (fig. 1b)(Fig. 4)(Fig. 6)((Col. 5, lines 1-29);

a step (b) of performing STC (system time clock) count initialization (frame display counter initialization, Col 7. 59-60) using a value of the stored PCR and decrementing an STC count (decrement display frame count, 92, Fig. 4) according to a direction (reverse and forward trick play modes Col. 7, lines 10-20) of a trick play mode (Fig. 1b) (Fig. 4)(Fig. 6)(Col. 7, lines 39-67;Col. 8 lines 1-27);

a step (c) of adjusting DTS (decoding timestamp) of a picture to be decoded according

to the direction and multiple- times speed of the trick play mode(Fig. 4)(Fig. 6)(Col. 7,

lines 39-58)(Col. 11, lines 21-60); and

a step (d) of decoding to output picture data of the selected program by controlling a

decoding time point by comparing a value of the adjusted DTS to a value of the

decremented STC count and by referring to the picture information according to the trick

play mode(Fig. 1b) (Fig. 4)(Fig. 6)(Col. 11, lines 21-60)(Col. 4, lines 53- 68; Col. 5, lines

1-28);

   As to claim 18, wherein in the step (b), the STC count is sequentially

decremented in case of a reverse trick play (Fig 1b) (Fig. 4)(Fig. 6)(Col. 7, lines 39-

67;Col. 8 lines 1-3);

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable

over U.S. Patent 6,658,199 B1 to Hallberg in view of U.S. Patent 7,031,259 to

Guttman et al. "Guttman" and in further view of U.S. Patent 6,453,116 B1 to Ando

et al. "Ando".

   As to claim 9, Hallberg as discussed in claim 1 above does not expressly

disclose wherein the record control unit stores information of a location where a picture

is stored, information of a location where a PCR value of the picture is stored, and each picture type in the storage medium, wherein the record control unit stores associative relation to the location information of the picture recorded in the storage medium by searching index information of the picture type, and wherein a time stamp is not stored in the storage medium.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine Hallberg with the teachings of Guttman. Motivation to combine would have been to provide status information of the decoding buffer so that data is not lost by overflowing of the buffer.

Ando teaches wherein the record control unit stores information of a location where a picture is stored, information of a location where a PCR value of the picture is stored, and each picture type in the storage medium, wherein the record control unit stores associative relation to the location information of the picture recorded in the storage medium by searching index information of the picture type, and wherein a time stamp is not stored in the storage medium (Fig. 1)(Col. 33, lines 40-57)(Col. 6, lines 63-66)(Col. 36, lines 63-67; Col. 37, lines 1-6).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine Hallberg as modified with the teaching of Ando. Rationale would have been that all claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

As to claim 10, Hallberg as discussed in claim 1 above does not expressly disclose wherein the storage medium has a large capacity of storing digital video streams and is randomly accessible.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine Hallberg with the teachings of Guttman. Motivation to combine would have been to provide status information of the decoding buffer so that data is not lost by overflowing of the buffer.

Ando teaches wherein the storage medium has a large capacity of storing digital video streams and is randomly accessible (Col. 1. lines 53-57).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine Hallberg as modified with the teaching of Ando. Motivation would have been in order to provide a recording medium that allows a random access to contents recorded on a recording medium.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ASHER KHAN whose telephone number is (571)270-5203. The examiner can normally be reached on 9:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (571)272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Marsha D. Banks-Harold/
Supervisory Patent Examiner, Art Unit 2621

/A. K./
Examiner, Art Unit 2621

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